

REMARKS

§ 112 Rejection

Claims 1-10 were rejected as failing to particularly point out and distinctly claim the invention due to the phrase in claim 1: "incoming calls are directed to a previously programmed directory number." The Examiner suggested that the claim be amended to refer to forwarding calls to a device, not to a directory number. Claim 1 has been amended to recite "... said first feature code activating call forwarding for said mobile station such that incoming calls are directed to a separate device associated with a previously programmed directory number." Accordingly, the § 112 rejection should be deemed to be overcome.

Obviousness Rejections

Claims 1, 4, 5, 11 and 13 are rejected as obvious over Goss (2003/0003900) in view of Amin et al. (7,171,221).

Applicants have amended the independent claims in a manner to distinguish the invention from the combination of Goss and Amin et al. In particular, the claims have been amended to recite that the mobile telephone is monitoring the signal strength of a signal transmitted between a base transceiver station in the cellular wireless telephone network and the mobile station, and continuing to monitor such a signal strength during a period when call forwarding is activated.

Thus, claim 1 recites, in part:

monitoring a measure of received signal strength at said mobile station, the measure of received signal strength being of a signal transmitted between a base transceiver station of a cellular wireless telephone network and the mobile station,

...

continuing to monitor signal strength of a signal transmitted between the base transceiver station and the mobile station at said mobile station during a period when call forwarding is activated; and

automatically transmitting a second feature code from said mobile station to a wireless network when said signal strength rises above said threshold level, said second feature code deactivating said call forwarding.

Similarly, independent claim 11 recites:

circuitry monitoring a measure of received signal strength from a base transceiver station of a cellular wireless telephone network;

programmable logic providing instructions for automatically transmitting a first feature code from said wireless telephone to a wireless network activating call forwarding when said circuitry determines that the received signal strength of a signal transmitted between the base transceiver station and the mobile station falls below a threshold level; and

programmable logic providing instructions for automatically continuing to monitor the received signal strength from a base transceiver station of a cellular wireless telephone network after the first feature code is transmitted and for transmitting a second feature code from said wireless telephone to a wireless network deactivating call forwarding when said circuitry determines that the received signal strength, having previously fallen below a threshold level, rises above said threshold level.

Claim 13 is in Jepson format and recites an improvement to a wireless network, i.e., providing a service control node in the cellular wireless telephone network that activates and deactivates a call forwarding service for roaming mobile stations, wherein said call forwarding service is activated and deactivated by transmission of first and second feature codes from said roaming mobile stations, respectively, and further wherein said first and second feature codes are transmitted when a monitored measure of received signal strength of a signal transmitted between the base transceiver stations and the mobile stations at said mobile stations falls below, and rises above, a threshold level, respectively.

Applicants submit that this approach to call forwarding using signal strength measurements from the base transceiver station in a cellular wireless telephone network is not obvious over the combination of Goss and Amin.

In particular, as to Goss, Goss' call forwarding is entirely based on the geographic proximity of the mobile phone to a landline phone. The mobile phone of Goss is monitoring a "beacon message" from the landline phone using a low-range radio transceiver. In the event that the Goss phone goes out of range of the low range "beacon message" radio signal emitted from landline phone then call forwarding to the mobile phone occurs. When the mobile phone goes back within range of the landline phone (and starts to pick up the "beacon message") then call forwarding back to the landline phone occurs. See Goss Abstract, Paragraphs 5, 16, 18, 19.

At no point is Goss monitoring the received signal strength from a base transceiver station of a wireless network to turn on call forwarding or turn it off in the manner claimed. Accordingly, in the event that the Goss mobile phone is out of range of the land line phone and loses signal, no call forwarding would occur. Goss thus completely misses the problem that is solved with this invention – triggering call forwarding when a mobile phone is losing signal from a base transceiver station in a cellular wireless network.

Amin is essentially cumulative with Goss in this respect. Amin's approach to call forwarding one telephone to another is to detect the proximity of the two phones. When the phones are proximate (e.g., the mobile telephone is near a landline phone), forwarding occurs. When the mobile phone drifts away (e.g., the user takes the phone with them when they go to work) then proximity is not longer present and call forwarding

occurs. See Amin, col. 1 line 60 to col. 2 line 32. Goss can detect proximity using various techniques such as GPS position (Col. 2 line 9), using position triangulation (col. 2 line 10-11), or by using short range wireless transceivers (e.g., Bluetooth) between two wireless phones (col. 2 lines 14-18; col. 10 lines 43-52).

Like Goss, at no point is Amin comparing signal strength measurements from the base transceiver station to a threshold as a triggering event to turn on or turn off call forwarding. Amin also does not address the problem of what to do when signal strength from a base transceiver is too weak to receive a call. Amin and Goss both completely miss the problem that is solved with this invention – triggering call forwarding when a mobile phone is losing signal from a base transceiver station in a cellular wireless network.

Accordingly, a person skilled in the art reviewing the combination of Amin and Goss would not arrive at the applicants' claimed invention since the teachings of the two references, either singly or in combination, fail to disclose or suggest the claimed invention. Accordingly, the rejection of the independent claims should be withdrawn.

The rejection of the dependent claims based on the two references should be withdrawn by virtue of claim dependency.

Rejection of claims 2, 3, 7 and 10

These claims are rejected as obvious over Goss in view of Amin, further in view of Lundborg.

Claims 2, 3 and 7 and 10 depend from claim 1. Lundborg is concerned with handoff of mobile devices between cells and methods of tuning a parameter indicating

the minimum sufficient signal strength threshold used in determining whether or not a preferred cell is suitable. (Background, col. 1 lines 7-14). Lundborg does not address call forwarding, nor does he teach or suggest that call forwarding, having been switched on, should be switched off in accordance with the teachings of claim 1 discussed above. Neither Lundborg nor Goss or Amin suggest monitoring signal strength from a base transceiver station and comparison of such signal strength to a threshold as the trigger to initiate the call forwarding. Nor do they teach, either solely or in combination, continuing to monitor received signal strength from a base transceiver station after call forwarding has been initiated and sending a second feature code when signal strength has improved above the threshold level. Accordingly, Lundborg in combination with Goss and Amin cannot render claims 2, 3, 7 and 10 obvious.

Claim 6

Claim 6 is rejected over Goss in view of Amin and Lo (RE 37,301).

While the Examiner is correct that Lo teaches transmitting information codes over access channels, this teaching of Lo fails to overcome the deficiency of Goss and Amin in failing to teach the subject matter of claim 1. Lo adds nothing to how a mobile device should perform call forwarding using a monitoring of received signal strength from a base transceiver station in a cellular wireless telephone network. Accordingly, the rejection of claim 6 should be withdrawn.

Claim 8

Claim 8 stands rejected over Goss in view of Amin, further in view of Jensen (2002/00022480). Claim 8 recites that the threshold level [to initiate sending of feature

codes to turn on and off call forwarding] depends on the type of mobile station. The applicants traverse the rejection.

The Examiner cites Jensen for a teaching of call forwarding wherein the threshold level for call forwarding varies on the type of mobile station (Jensen, paragraph 15). Applicants submit that this is not a correct analysis of Jensen. Jensen teaches that values involved (signal strength, related to interference of channels between cells) are “determined by the particular type of *mobile system involved*.” The reference then discusses various types of mobile systems (not *types of devices, as in claim 8*) such as CDMA system and AMPS (American mobile phone systems). Claim 8 is concerned with different types of mobile devices (such as year, make and model of device) within a given mobile phone system, not differences between mobile phone systems.

Moreover, even if the concepts of Jensen were applied to Goss and Amin, the resulting combination does not overcome the rejection of claim 1 since Jensen is silent on call forwarding as claimed in claim 1 and instead is directed to handoff between cells and determining interference between cells. It does not overcome the deficiency of Goss and Amin discussed above.

In view of the above, the rejection of claim 8 should be withdrawn.

Claim 9

Claim 9 stands rejected as obvious over Goss in view of Amin, and further in view of Chawla (6,496,700). Claim 9 depends from claim 1 and further recites that the threshold level [to initiate sending of feature codes to turn on and off call forwarding] is within a certain decibel range.

Assuming for the sake of argument that Chawla is appropriate for citation of the subject matter of claim 9, it does not make up for the deficiency of Goss and Amin failing to teach or suggest the subject matter of claim 1, from which claim 9 depends. In particular, Chawla is directed to methods for determining organizational parameters in a wireless system and discloses methods of determining signal strength and losses in wireless communications systems. Chawla is silent on a call forwarding feature, let alone call forwarding as claimed in claim 1. Even if Chawla was combined with Goss and Amin as the primary reference, at most it teaches characterization of organization parameters in a wireless system such as the Goss or Amin system, but that fails to account for a method by which call forwarding should be terminated, by means of feature codes, by monitoring received signal strength measurements from a base transceiver station as claimed in claim 1. Accordingly, the rejection of claim 9 should be withdrawn.

Claim 12

Claim 12, which depends from claim 11, stands rejected as obvious over Goss in view of Amin, further in view of Haub (2004/015429). Haub is cited for a teaching of circuitry monitoring a ratio of E_c/I_o where E_c is a measure of carrier strength and I_o is a measure of interference.

Haub's teaching does not overcome the deficiency of Goss and Amin in failing to teach or suggest the feature of claim 11 of a wireless telephone that includes logic "automatically continuing to monitor the received signal strength after the first feature code is transmitted *and for transmitting a second feature code . . . deactivating call*

forwarding when said circuitry determines that the received signal strength, having fallen previously below a threshold level, rises above said threshold level.” As noted above, both Goss and Amin use proximity between two phones as the triggering event to start and stop call forwarding, e.g., using low range RF beacon signals between the two phones.

Haub’s teaching, if applied to Goss or Amin, would suggest using Ec/Io measurements for the low-range beacon signals emitted by the phones as a method of determining proximity of the two phones. Nothing in Haub suggests that the Amin or Goss phones should ignore proximity to the phones and instead monitor the signal strength from a base transceiver station. Consequently, even if Haub were to be combined with Goss and Amin, the result is the not invention of claim 11 or claim 12. The rejection should be withdrawn.

Claim 14

Claim 14 stands rejected as obvious over Amin in view of Goss, further in view of Kisse et al. (6567665). The Examiner cites Kisse for a teaching of a service control node setting a threshold level (col. 13 lines 10-13.) The disclosure of received signal strength indicator (RSSI) in Kisse is in the context of how cells should be ranked in order to prioritize cells and handle a situation of overflow or excess call volumes. See col. 12 lines 48 et seq., col. 1 lines 7-14; col. 2 lines 51-65. The context of Kisse’s teaching of setting thresholds *for purposes of cell rankings* adds nothing to the utter lack of a teaching of Goss or Amin of monitoring received signal strength from a base transceiver station in a wireless network and sending a feature code to a network node to

turn off call forwarding when the signal strength rises above a threshold. Since the network node of Kisse is *ranking cells, not activating and deactivating call forwarding*, it does not teach a “service control node in said cellular telephony network that activates and deactivates a call forwarding service for said roaming mobile stations, wherein said call forwarding service is activated and deactivated by transmission of first and second feature codes from said roaming mobile stations, respectively, and further wherein said first and second feature codes are transmitted when a monitored measure of received signal strength at said mobile stations falls below, and rises above, a threshold level, respectively”, as claimed in claim 13, from which claim 14 depends.

Claim 15

Claim 15 stands rejected as obvious over Amin in view of Goss, further in view of Balachandran (5,594,943). The Examiner cites Balachandran for a teaching of a threshold level at which calls are dropped, citing to col. 2 lines 24-25. The discussion of thresholds in Balachandran is in the context of *handoff of a mobile between cells/sectors, not call forwarding*. The document discloses that there can be two thresholds, a primary one and a secondary or emergency threshold, see col. 2 lines 2-5. The reference is explaining background information on handoffs between cells and sectors, noting that such handoffs preferably occur so as to avoid dropping of calls. That teaching is totally irrelevant to the subject matter of claim 15 (and independent claim 13) of a node in a network that is switching on and off call forwarding in response to measurements of received signal strength from a base transceiver station of a cellular wireless telephone network. Balachandran fails to overcome the deficiency of Goss or Amin in failing to

teach of monitoring received signal strength from a base transceiver station in a cellular wireless telephone network and sending a feature code to a network node to turn off call forwarding when the signal strength rises above a threshold.

Claim 16

Claim 16 stands rejected as obvious over Goss in view of Amin, and further in view of Balachandran and Hilliard (U.S. 6,876,949). Claim 16 depends ultimately on claim 13 and recites that the threshold level (for triggering sending a feature code to turn off call forwarding) is offset from a dropped call level by a fixed amount.

Hilliard is non-analogous art, in that it is referring to calibration of inductive vehicle detectors. See col. 4 lines 54-col. 5 line 23. The present invention is directed to call forwarding in the field of wireless telephony. The two fields have nothing to do with each other. Furthermore, both the Balachandran and Hilliard references disclose nothing in the way of call forwarding for wireless telephones and add nothing to the deficiency of Goss or Amin in failing to disclose or suggest the subject matter of claim 13.

Claim 17

Claim 17 stands rejected over Goss and Amin, further in view of Jensen. Claim 17 depends from claim 13 and adds the same subject matter as found in claim 8, discussed above.

The Examiner cites Jensen for a teaching of call forwarding wherein the threshold level for call forwarding varies on the type of mobile station (Jensen, paragraph 15). Applicants submit that this is not a correct analysis of Jensen. Jensen teaches that values

involved (signal strength, related to interference of channels between cells) are “determined by the particular type of *mobile system involved*.” The reference then discusses various types of mobile systems (not *types of devices, as in claim 17*) such as CDMA system and AMPS (American mobile phone systems). Claim 17 is concerned with different types of mobile devices (such as year, make and model of device) within a given mobile phone system, not differences between mobile phone systems. Accordingly, when the teaching of Jensen is applied to Goss or Amin it fails to overcome the deficiencies noted above in the analysis of claim 13.

Favorable reconsideration of the application is requested.

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by:

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CERTIFICATE OF MAILING

The undersigned hereby certifies that the foregoing Response is being deposited as first class mail, postage prepaid, in an envelope addressed to Commissioner for Patents PO Box 1450 Alexandria VA 22313-1450 on this 7 th day of September, 2007.

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